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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,371	12/21/2001	Robert T. Arntz	706240US1	5140

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EXAMINER

MILORD, MARCEAU

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,371

Applicant(s)

ARNTZ, ROBERT T.

Examiner

Marceau Milord

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7-13, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed (US Patent No 6175787 B1) in view of Doyle et al (US Patent No 5850188).

Regarding claim 1, Breed discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic (col. 4, line 44- col. 5, line 28), the vibration diagnostic instrument (170 of fig. 1) comprising: a sensor (153 of fig. 1) for sensing vibrations and generating a sensor signal in response thereto (col. 8, line 59- col. 9, line 29; col. 10, lines 36-42; col. 12, lines 48-57).

However, Breed does not specifically disclose a controller including a transmitter portion that generates a diagnostic signal modulated only by the sensor signal, the transmitter portion transmitting the diagnostic signal over radio waves.

On the other hand, Doyle et al, from the same field of endeavor, discloses a transmitter that includes a transmitting unit for transmitting the plurality of signals to the receiving unit, a control unit operatively connected to the transmitting unit for controlling transmission of the plurality of signals and a diagnostic gathering and a storage unit electrically connected to the control unit for supplying diagnostic data to the control unit. Furthermore, the transmitter that includes a key fob unit selectively connected to the control unit and to the diagnostic unit (figs. 1-3; col. 2, line 41- col. 3, line 19). In addition, the transmitting means includes link means for transferring the diagnostic data by means of a modulated radio frequency carrier (col. 4, lines 1-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Doyle to the system of Breed in order to provide a remote entry key fob transmitter that possesses diagnostic information.

Regarding claim 7, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic (col. 4, line 44- col. 5, line 28), wherein a radio frequency band over which the diagnostic signal is transmitted may be selected from a plurality of predetermined radio frequency bands (col. 8, line 60- col. 9, line 23).

Regarding claim 8, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic (col. 4, line 44- col. 5, line 28), wherein the controller further includes a microprocessor portion that is configured to automatically power the vibration diagnostic instrument down after a predetermined amount of time has elapsed (col. 8, line 60- col. 9, line 23; col. 10, line 36- col. 11, line 22; col. 14, lines 5-50).

Regarding claim 9, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic (col. 4, line 44- col. 5, line 28), comprising a

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power source, the power source including a battery and a switching power supply (col. 13, line 1- col. 14, line 50).

Regarding claim 10, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic (col. 4, line 44- col. 5, line 28), wherein the power source further includes a voltage detector for monitoring a voltage of the battery, the voltage detector being configured to detect when the voltage of the battery is less than a predetermined voltage threshold and to responsively generate a low voltage signal (col. 8, line 60- col. 9, line 23; col. 15, lines 8-52).

Regarding claim 11, Breed discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic, the vibration diagnostic instrument (170 of fig. 1) comprising: a clamp that is configured to be coupled to a component or a structure of an automotive vehicle (col. 4, line 44- col. 5, line 28); a sensor (153 of fig. 1) coupled to the clamp, the sensor being operable for sensing vibrations and generating a sensor signal in response thereto (col. 8, line 59- col. 9, line 29; col. 10, lines 36-42; col. 12, lines 48-57).

However, Breed does not specifically disclose a controller including a transmitter portion that generates a diagnostic signal modulated only by the sensor signal, the transmitter portion transmitting the diagnostic signal over radio waves.

On the other hand, Doyle et al, from the same field of endeavor, discloses a transmitter that includes a transmitting unit for transmitting the plurality of signals to the receiving unit, a control unit operatively connected to the transmitting unit for controlling transmission of the plurality of signals and a diagnostic gathering and a storage unit electrically connected to the control unit for supplying diagnostic data to the control unit. Furthermore, the transmitter that

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includes a key fob unit selectively connected to the control unit and to the diagnostic unit (figs. 1-3; col. 2, line 41- col. 3, line 19). In addition, the transmitting means includes link means for transferring the diagnostic data by means of a modulated radio frequency carrier (col. 4, lines 1-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Doyle to the system of Breed in order to provide a remote entry key fob transmitter that possesses diagnostic information.

Regarding claim 12, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic, the vibration diagnostic instrument (170 of fig. 1), wherein the clamp includes a pair of clamp halves and a spring, the clamp halves being pivotably coupled to one another, each of the clamp halves including a jaw portion, the spring exerting a force onto the clamp halves that biases the jaw portions toward one another, the sensor being coupled to one of the jaw portions (col. 8, line 59- col. 9, line 29; col. 10, lines 36-42; col. 12, lines 48-57 ; col. 13, line 13- col. 14, line 47).

Regarding claim 13, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic, the vibration diagnostic instrument (170 of fig. 1), wherein the sensor is a piezoelectric bender (col. 8, line 59- col. 9, line 29; col. 15, lines 7-52).

Regarding claim 18, Breed as modified discloses a vibration diagnostic instrument (figs. 1-2) for use by an automotive maintenance mechanic, the vibration diagnostic instrument (170 of fig. 1), wherein a radio frequency band over which the diagnostic signal is transmitted may be selected from a plurality of predetermined radio frequency bands col. 13, line 13- col. 14, line 47; col. 15, lines 7-52).

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3. Claims 2-6, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed (US Patent No 6175787 B1) in view of Doyle et al (US Patent No 5850188) as applied to claims 1 and 11 above, and further in view of Diaz et al (US Patent No 6356822 B1).

Regarding claims 2-6, Breed and Doyle disclose everything claimed as explained above except the radio waves are transmitted over an FM frequency band, wherein the FM frequency band is in the range of about 87.9 MHz to about 92.9 MHz.

However, Diaz et al discloses a communication system which includes a multi-functional antenna system for the vehicle that has the capability to receive AM/FM radio and television signals, and transmit and receive radio signals, satellite and microwave and cellular phone communications (figs. 1-3; col. 2, lines 5- 27; col. 6, lines 45-61; col. 8, lines 36- 56; col. 9, lines 5- 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Diaz to the modified system of Doyle and Breed in order to provide a remote entry key fob transmitter that possesses diagnostic information.

Regarding claims 14-17, Breed and Doyle disclose everything claimed as explained above except the radio waves that are transmitted over an FM frequency band, wherein the FM frequency band may be selectively changed between a plurality of predetermined FM radio frequency bands in the range of about 87.9 MHz to about 92.9 MHz.

However, Diaz et al discloses a communication system which includes a multi-functional antenna system for the vehicle that has the capability to receive AM/FM radio and television signals, and transmit and receive radio signals, satellite and microwave and cellular phone communications (figs. 1-3; col. 2, lines 5- 27; col. 6, lines 45-61; col. 8, lines 36- 56; col. 9, lines 5- 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to apply the technique of Diaz to the modified system of Doyle and Breed in order to provide a remote entry key fob transmitter that possesses diagnostic information.

Response to Arguments

4. Applicant's arguments filed on September 13, 2004 have been fully considered but they are not persuasive.

Applicant's representative argues that Breed and Doyle do not disclose that the generated diagnostic signal is modulated only by the sensor signal, and that the transmitter transmits the diagnostic signal over radio waves. They do not provide such a relationship between the elements.

However, Doyle shows in figure 1, a transmitter that includes a transmitting means 18 for transmitting the plurality of signals to the receiving unit 14. The transmitting means includes link means for transferring the diagnostic data by means of a modulated radio frequency carrier. In addition, the link means transmits both signals corresponding to the diagnostic data and the command signals. The receiving unit includes a data exchange or interface port for transferring the diagnostic to a diagnostic instrument for display (see col. 2, lines 40-67; col. 3, lines 51-67; col. 4, lines 1-18; col. 4, lines 56-67). Since the transmitter transmits a plurality of signals to the receiving unit, the receiver has decoded these signals into their desired form. These signals have been modulated and demodulated. It is considered that the diagnostic signals are modulated by the sensor signals. The Examiner still believes that the Doyle reference was used to disclose such feature as it was applied in the above rejection.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARCEAU MILORD

Marceau Milord

Examiner

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MARCEAU MILORD
PRIMARY EXAMINER

1-9-05